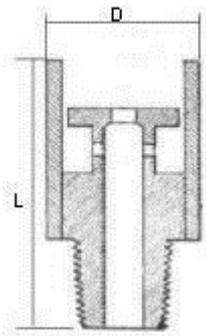


BB Burner Tips

These burner tips are very popular where a *conical* type of flame is desired. They have excellent flame retention and their various capacities would suit most applications. The "BB" series have a large center port surrounded by a retention ring that produces a flame from 10-150 mm in length. The "BB" design is



PART NUMBER	SIZE (BSPM)	TOTAL PORT AREA mm ² /in ²	CAPACITY MJ/HOUR	DIMENSIONS (mm)	
				Length	Diameter
BBOO	6mm	7/.012	3-5	21	12.5
BB1	6mm	16/.026	8-12	37	21
BB2	8mm	32/.051	15-25	42	26
BB3	10mm	43/.067	20-30	48	33

Mounting burner tips

These tips are commonly mounted onto pipe manifolds. It is important to make certain the pipe will allow the correct capacity, the following table illustrates the amount of *total mixture* (air and gas) that can be passed at a mixture pressure of approx. 125 Pa. Thick wall black pipe is usually employed.

PIPE SIZE BSP	25mm	32mm	40mm	50mm	65mm	80mm
Flow (m ³ /ft ³ /hr)	23/800	43/1500	63/2200	100/3500	160/5500	230/8000

JM GAS BURNERS

The superior JM design has characteristics that place it among the best burner tips in the world. Originally developed by the American Carlisle company, the JM burner will operate on any gas, using atmospheric air with an appropriate inspirator or premix with an air/gas aspirator (please ask for more detail on these items). The features of this burner are the unsurpassed flame retention, the ability to draw in extra secondary air and the flame shape. The burners will also operate on a wide range of gas/air ratios enabling concentrated spot heating or a softer general flame shape.





JM GAS BURNERS

ADVANTAGES

- Retains the flame on slow burning gasses.
- Will burn on a reducing atmosphere.
- The design actually increases the flame temperature.
- Retains the flame on high mixture pressures.
Stainless steel manufacture in most sizes.

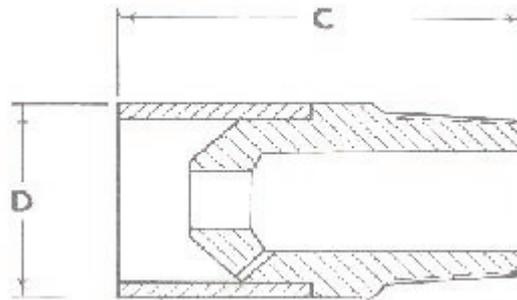
PART NUMBER	JM1	JM2	JM3	JM4	JM5	JM7
SIZE (BSPM)	8mm	8mm	8mm	15mm	20mm	25mm
INNER (BSPF)	6mm	n/a	6mm	10mm	15mm	20mm
PORT AREA (mm ²)	17	44	44	100	135	226
LENGTH	29mm	48mm	42mm	54mm	58mm	67mm
DIAMETER (Nom)	22mm	25mm	28mm	34mm	45mm	61mm

MIXTURE PRES-SURES	CAPACITY MJ/HOUR					
	JM1	JM2	JM3	JM4	JM5	JM7
.75 kPa	5	14	14	31	42	70
1.5 kPa	8	20	20	45	60	100
2.25 kPa	10	25	25	55	72	125
3.0 kPa	12	28	28	63	84	140
4.5 kPa	14	35	35	79	105	200
6.0 kPa	16	40	40	92	120	207
7.5 kPa	18	45	45	100	135	235

CS TYPE BURNER TIPS

The CS tips are used where a conical type flame is required and are used as a machined alternative to the cast iron FR tips. The CS burners use stainless steel shields for long life and have excellent flame retention. The accurate machining and long burner port allow good flame characteristics. The CS burners are also available, for special situations, with female threads.

These burners can be used on Natural gas, Propane, Butane or manufactured gas with compressed or blower air.



PART NUMBER	THREAD (BSPM)	C	D	CAPACITY (MJ/HR) @ 1 kPa 2 kPa (m.p)	
CS15	15mm	49	25	20	28
CS20	20mm	61	32	42	58
CS25	25mm	67	41	88	120

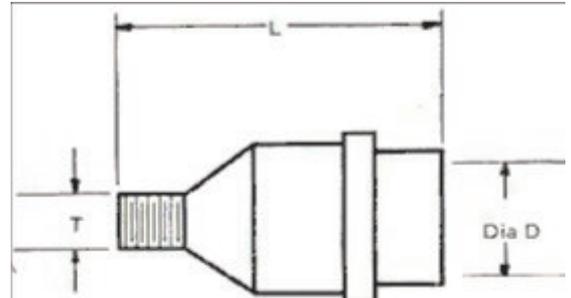
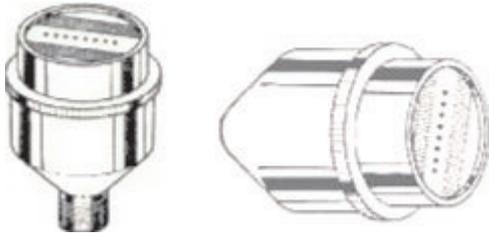
Please note: the capacities are given at 1 and 2 kPa mixture pressures. The MJ rating is calculated with 80% of the required air available in the mixture.

MARSHALL BURNERS

These burners are primarily used for localised heating, brazing or soldering. Although manufactured of brass, the Marshall burners utilise a special tip design that stops back heat. The flame characteristic is a series of sharp cones surrounded by excellent flame retention. They are designed to be used singularly or on a manifold with the correct air/gas mixer. These burners can be used on Natural gas, Propane, Butane or manufactured gas with compressed or blower air.

These tips are manufactured to order only. The MBD16P has 2 rows of 8 ports each.

MARSHALL BURNERS

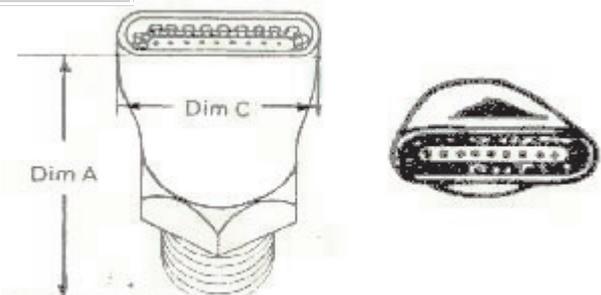


PART NUMBER	SIZE BSPM)	NUMBER OF PORTS	CAPACITY MJ/HR	DIMENSIONS (mm)	
				Length	Diameter
MBS8P	8mm	8	10	42	25
MBD16P	8mm	16	25	42	25
MBS13P	8mm (F)	13	20	47	35

WIDE FLAME BURNERS

These burners utilise stainless steel components and have a divergent or parallel flame pattern. The NS104 (illustrated) has a true "fishtail" flame shape and the SN21 has a straight flame pattern using 3 converging rows. These burners are used where a hot, localised flame is required and are especially suitable for silver soldering, brazing, annealing, and general industrial applications. The SN21 is the standard burner supplied with the Shuttle brazing machine and has a larger heat output than the NS104. As expected, these tips have good flame retention due to their unique designs, the SN21 in particular can be used on high mixture pressures. These burners can be used on Natural gas, Propane, Butane or manufactured gas with compressed or blower air. Both tips have a 1/4" BSP male thread

PART NUMBER	NUMBER OF PORTS	Length "A"	Width "C"
NS104	7	36 mm	25 mm
SN21	13	58 mm	32 mm



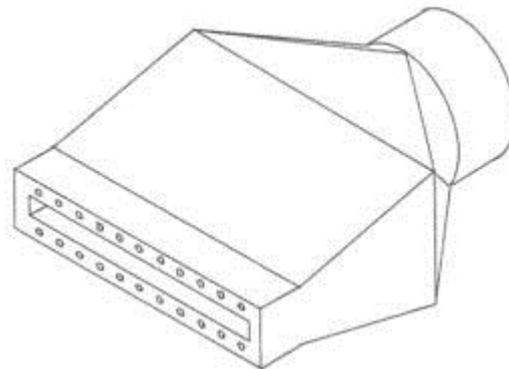
HATCHET BURNERS

The hatchet burner is a low mixture pressure, cast iron atmospheric type burner head, with a distinctive slot type flame. The tip is used in a variety of situations in place of the AN type tip where an elongated flame is preferred. The burners can be mounted singularly with an inspirator or manifolded together with a suitable pipe manifold and a main mixer. The burners are approx. 90 mm wide at the flame exit and approx. 110 mm long. The capacity is approx. 30-40 MJ/Hour.

The SPI25 1" BSP short inspirator is the standard mixer supplied with the burner. We would require the gas type and pressure available at the burner to be able to size the jet.

USES

- Low temperature ovens
- Slot type forge furnaces
- Boilers
- Tank heating



RIBBON BURNER TIPS

The ribbon burner tips were designed to produce a fine flame and are very popular as torch heads. The RH burner is used as the fine flame tip for the MT1 torch and the RJ tip is used with the jewelers torch. The unique flame retention design and the extra long port give stable, cone shaped flames. They are made of brass and can be used on Natural gas, Propane, Butane or manufactured gas with compressed or blower air.

PART NUMBER	SIZE (BSPM)	CAPACITY MJ/HR	DIMENSIONS (mm)	
			A	C
RH	6mm	15	41	25
RJ	8mm	5	27	16

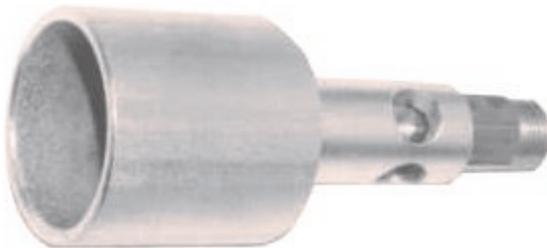


DR-3 BURNER

Economical, compact atmospheric burner designed specifically for low pressure gasses. The burner incorporates flame retention, orifice and inspirating section in the one unit. The DR-3 is available in 3 basic types.

DR-3	Basic burner
DR-3A	Burner with spark igniter
DR-3B	Burner with spark and flame detector

The DR-3 burner has a range of capacities depending on the amount of draft available. From 40-100 MJ/hour is possible. The burner will include a pilot drilled orifice unless a specific capacity is stated.



APPLICATIONS

- Compact heating torches
- Air heaters
- Immersion tube burners

INSERTAJET

EASY CONVERSION

To convert a bar burner with the Insertajet, the flame port orifices are simply drilled out with the appropriate drill. Into each drilled orifice an Insertajet is tapped lightly home with a small punch, so that the stainless steel retention ring remains about 1/16 clear of the burner tube (as shown). If holes are drilled to the correct size, that is all that is required to secure the jets with no danger of falling out. When all flame ports have been treated, the burner is ready for use.

LONG LIFE

With a mild steel body and stainless retention ring, the Insertajet can be relied on to give a long operational life.

Insertajet size	Orifice Dia D (ins)	Insertion Port D (ins)	Recommended Centres c (ins)	Nom Rating at 6°wg NG btu/hr
No 00	0	0.234	0.5	50
No 52	0.063	0.234	0.5	150
No 35	0.110	0.234	0.5	350
No 28	0.140	0.234	0.5	500
No 8	0.198	0.343	0.625	1000

